



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,362	09/05/2003	Ingolf Groening	2735	8248
7590 03/21/2007 STRIKER, STRIKER & STENBY 103 East Neck Road Huntington, NY 11743			EXAMINER FERGUSON, MICHAEL P	
			ART UNIT	PAPER NUMBER
			3679	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/21/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/656,362

Applicant(s)

GROENING ET AL.

Examiner

Michael P. Ferguson

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claim 18 is objected to because of the following informalities:

Claim 18 (line 2) recites "which his". It should recite --which is--.

Claim 18 (line 3) recites "said first abutment surface". It should recite --said at least one first abutment surface--.

Claim 18 (line 5) recites "said first mentioned second abutment surface". It should recite --said at least one second abutment surface--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudoreille et al. (US 5,955,805) in view of Narasimhan et al. (US 6,520,703).

As to claims 1-8 and 10-13, Chaudoreille et al. disclose a connection element **20** composed of metal and *capable of* a releasable connection of an electric motor (connected to an alternator via bearing **10**; shown in Figure 2) with a machine or a machine part **34** which is driven by the electric motor, the connecting element

Art Unit: 3679

comprising at least one first abutment surface mountable on a wall of the machine or the machine part **34**, and at least one second abutment surface fixedly connected with the electric motor (via bearing **10**);

wherein the first abutment surface is provided with a blind hole **51,63** with an inner thread for screwing connection of the connecting element on the machine or on the machine part **34**;

wherein the second abutment surface is provided with a throughgoing opening **52,62** for screw connection of the electric motor (the alternator via bearing **10**) with the connecting element (Figures 1 and 2).

Chaudoreille et al. fail to disclose a connection element comprising at least one of the first abutment surface and the second abutment surface being provided with a thin metallic hard coating applied on and non-detachably connected with the abutment surface for providing efficient thermal insulation between the electric motor and the machine or the machine part, which thin metallic hard coating is a surface treatment inseparable from the abutment surface, with a thermal conductivity having a value smaller than 2 W/Km; wherein the inner thread of the first abutment surface is provided with the thin metallic coating; wherein the throughgoing opening is provided with the thin metallic coating.

Narasimhan et al. teach a connection element **42,54** comprising an abutment surface provided with a thin metallic hard coating **60,62** applied on and non-detachably connected with the abutment surface *capable of* providing efficient thermal insulation between an electric motor and a machine or a machine part, which thin metallic hard

Art Unit: 3679

coating is a surface treatment inseparable from the abutment surface, with a low thermal conductivity value; the surface treatment preventing wear due to prolonged high temperatures due to high engine speeds and vibration (column 1 lines 25-31, column 2 lines 15-35, Figure 2). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a connection as disclosed by Chaudoreille et al. to have a surface treatment on the first and second abutment surfaces as taught by Narasimhan et al. in order to prevent wear due to prolonged high temperatures due to high engine speeds and vibration.

Narasimhan et al. fail to disclose a thin metallic coating having a thermal conductivity having a value smaller than 2 W/Km; and having a nitrated titanium, a nitrated titanium mixed with carbon, a nitrated alloy of titanium and aluminum, a chromium mixed with carbon, a nitrated chromium, a tungsten carbide, or a tungsten mixed with carbon.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a connection element as disclosed by Chaudoreille et al. in view of Narasimhan et al. wherein the thin metallic coating has a thermal conductivity having a value smaller than 2 W/Km; and has a nitrated titanium, a nitrated titanium mixed with carbon, a nitrated alloy of titanium and aluminum, a chromium mixed with carbon, a nitrated chromium, a tungsten carbide, or a tungsten mixed with carbon as such practice is a

Art Unit: 3679

design consideration within the skill of the art.

As to claim 9, Narasimhan et al. fail to disclose a connection element wherein the thin metallic coating has a thickness between 1 um and 10 um.

The applicant is reminded that a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a connection element as disclosed by Chaudoreille et al. in view of Narasimhan et al. wherein the thin metallic coating has a thickness between 1 um and 10 um as such practice is a design consideration within the skill of the art.

As to claim 14, Chaudoreille et al. disclose a connection element **20** comprising integrate cooling conduits **14** for circulation of cooling fluid (Figures 1 and 2).

As to claim 16, Chaudoreille et al. disclose a connection element **20** composed of metal and *capable of* a releasable connection of an electric motor (connected to an alternator via bearing **10**; shown in Figure 2) with a machine or a machine part **34** which is driven by the electric motor, the connecting element comprising at least one first abutment surface mountable on a wall of the machine or the machine part **34**, and at least one second abutment surface fixedly connected with the electric motor (via bearing **10**);

wherein the connection element comprises threaded openings **51,63** (Figures 1 and 2).

Chaudoreille et al. fail to disclose a connection element comprising at least one of the first abutment surface and the second abutment surface being provided with a thin metallic hard coating applied on and non-detachably connected with the abutment surface for providing efficient thermal insulation between the electric motor and the machine or the machine part, which thin metallic hard coating is a surface treatment inseparable from the abutment surface, with a thermal conductivity having a value smaller than 2 W/Km; wherein the threaded openings are provided with the thin metallic coating.

Narasimhan et al. teach a connection element **42,54** comprising an abutment surface provided with a thin metallic hard coating **60,62** applied on and non-detachably connected with the abutment surface *capable of* providing efficient thermal insulation between the electric motor and the machine or the machine part, which thin metallic hard coating is a surface treatment inseparable from the abutment surface, with a low thermal conductivity value; the surface treatment preventing wear due to prolonged high temperatures due to high engine speeds and vibration (column 1 lines 25-31, column 2 lines 15-35, Figure 2). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a connection as disclosed by Chaudoreille et al. to have a surface treatment on the first and second abutment surfaces as taught by Narasimhan et al. in order to prevent wear due to prolonged high temperatures due to high engine speeds and vibration.

Narasimhan et al. fail to disclose a thin metallic coating having a thermal conductivity having a value smaller than 2 W/Km.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a connection element as disclosed by Chaudoreille et al. in view of Narasimhan et al. wherein the thin metallic coating has a thermal conductivity having a value smaller than 2 W/Km as such practice is a design consideration within the skill of the art.

As to claim 17, Chaudoreille et al. disclose a connection element **20** wherein the connecting element is elongated in a longitudinal direction (shown in cross-sectional view in Figure 2) and has two opposite faces spaced from one another in a transverse direction which is transverse to the longitudinal direction, the first abutment being provided on one of the faces, while the second abutment surface is provided on the other face of the connecting element (Figure 2).

As to claim 18, Chaudoreille et al. disclose a connection element **20** further comprising another first abutment surface (shown in cross-sectional view in Figure 2) which is spaced in a longitudinal direction from the at least first abutment surface, and another second abutment surface which is spaced from the at least one second abutment surface in a longitudinal direction, so that on the opposite faces of the connecting element two first abutment surfaces and two second abutment surfaces are arranged correspondingly (Figure 2).

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narasimhan et al.



As to claims 1-8, Narasimhan et al. disclose a connection element **42** composed of metal and *capable of* a releasable connection of an electric motor (connected to generator shaft **30**; shown in Figure 2) with a machine or a machine part **54** which is driven by the electric motor, the connecting element comprising at least one first abutment surface **62** mountable on a wall of the machine or the machine part **54**, and at least one second abutment surface fixedly connected with the electric motor (via generator shaft **30**), at least one of the first abutment surface and the second abutment surface being provided with a thin metallic hard coating **62** applied on and non-detachably connected with the abutment surface *capable of* providing efficient thermal insulation between the electric motor and the machine or the machine part, which thin metallic hard coating is a surface treatment inseparable from the abutment surface (column 1 lines 25-31, column 2 lines 15-35, Figure 2).

Narasimhan et al. fail to disclose a connection element wherein the thin metallic coating has a thermal conductivity having a value smaller than 2 W/Km; and having a nitrated titanium, a nitrated titanium mixed with carbon, a nitrated alloy of titanium and aluminum, a chromium mixed with carbon, a nitrated chromium, a tungsten carbide, or a tungsten mixed with carbon.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a connection element as disclosed by Narasimhan et al. wherein the thin metallic

Art Unit: 3679

coating has a thermal conductivity having a value smaller than 2 W/Km; and has a nitrated titanium, a nitrated titanium mixed with carbon, a nitrated alloy of titanium and aluminum, a chromium mixed with carbon, a nitrated chromium, a tungsten carbide, or a tungsten mixed with carbon as such practice is a design consideration within the skill of the art.

As to claim 9, Narasimhan et al. fail to disclose a connection element wherein the thin metallic coating has a thickness between 1 um and 10 um.

The applicant is reminded that a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a connection element as disclosed by Narasimhan et al. wherein the thin metallic coating has a thickness between 1 um and 10 um as such practice is a design consideration within the skill of the art.

### ***Response to Arguments***

5. Applicant's arguments filed December 15, 2006 have been fully considered but they are not persuasive.

As to claims 1 and 16, Attorney argues that:

Narasimhan et al. do not teach or disclose a connection element comprising a thin metallic hard coating applied on and non-detachably connected with an abutment surface *for providing efficient thermal insulation between an electric motor and a machine or a machine part.*

Examiner disagrees. As to claims 1 and 16, Narasimhan et al. teach a connection element **42,54** comprising an abutment surface provided with a thin metallic hard coating **60,62** applied on and non-detachably connected with the abutment surface, with a low thermal conductivity value *capable of* providing efficient thermal insulation between an electric motor and a machine or a machine part; the surface treatment preventing wear due to prolonged high temperatures due to high engine speeds and vibration (column 1 lines 25-31, column 2 lines 15-35, Figure 2).

Examiner notes that neither an electric motor nor a machine part have been positively claimed, nor has the heat transfer process between such elements been claimed; only an element *capable of* providing thermal insulation has been claimed as the invention. According, the thin metallic hard coating taught within the Narasimhan et al. reference is deemed to read on the claimed coating of the instant claims.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3679

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
MPF

03/19/07



DANIEL P. STODOLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3500